

Application No. 10/813,532
Amendment dated October 24, 2006
After Final Office Action of July 24, 2006

Docket No.: 29171/39345

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REMARKS

Receipt of the official action mailed July 24, 2006 is acknowledged.

The examiner rejected to claim 43 under 35 U.S.C. § 112, second paragraph. In response, applicants have canceled claim 43 and added new claim 49. New claim 49 incorporates claim 43 and all of the limitations of the claims from which claim 43 was dependent upon. Accordingly, the rejection should be withdrawn. Applicants regret the apparent inadvertent omission of the limitation noted by the examiner in paragraph 3 of the detailed action.

Turning now to the 35 U.S.C. § 103 rejections, the examiner rejected claims 27-29, 31-32, 34-36 and 39 under 35 U.S.C. § 103 for allegedly being unpatentable over Lak et al., (U.S. Patent Publication No. 2004/0256395) in view of Dasch et al., (U.S. Patent No. 5,433,906); claim 30 for allegedly being unpatentable over Lak and Dasch in view of Sharpe (U.S. Patent No. 4,077,921); claims 33, 37-38, and 40 as allegedly being unpatentable over Lak and Dasch in view of Liu (U.S. Patent No. 5,515,216); claims 42-44 as allegedly being unpatentable over Lak and Dasch in view of Liu and Applicants Admitted Prior Art (APA).

Claim 27 has been amended and now recites, in part, a reinforcing material consisting of a plurality of *discrete* strengthening fibers, wherein the strengthening fibers have diameters ranging from about 1 nm to about 1 µm and lengths ranging from about 0.1 µm to about 50 µm. Thus, the reinforcing material consists solely of the plurality of discrete strengthening fibers. By comparison, Lak teaches the use of a "web layer...which is preferably constructed of a polypropylene netting approximately 1 inch by 1 inches, formed in a square right-angled grid orientation..." (see paragraph [0033] of Lak). Lak provides no disclosure for the use of discrete strengthening fibers as a reinforcing material at all, let alone as the *sole source* of the reinforcing material. Reliance was placed on Dasch as teaching the use of strengthening fibers within the claimed dimensional range.

One of ordinary skill in the art would not be motivated to substitute the strengthening fibers disclosed by Dasch for the web layer disclosed by Lak, because the web layer of Lak is required as the sole reinforcing material. A continuous structural web is the very antithesis of a plurality of discrete reinforcing fibers. Lak does not teach or suggest the use of any other type of reinforcing material other than the continuous web layer. Accordingly, there is no suggestion to modify Lak without changing the principle operation of the Lak reference and without discarding the express teachings of the Lak reference. Further, there is no suggestion in any of the cited references to modify Lak in such a way that would render the web structurally redundant.

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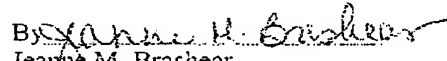
Moreover, there is simply no way to combine a reference that disperses a reinforcing material in a *random orientation* (Dasch, claim 17), with any reference that discloses a reinforcing material in a *fixed orientation* (Lak). The references operate on mutually exclusive principles, and simply are not combinable in any event. Accordingly, no combination of Lak and Dasch teaches or suggests all of the limitations of the claims and the rejections should be withdrawn.

Further, because the claims recite the use of discrete strengthening fibers as the sole reinforcing material, one of skill in the art would not be motivated to combine the insulating layer of Lak with the reinforcing material disclosed in any of the other supporting references in order to arrive at the claimed invention because doing so would require the removal of the web layer completely. Accordingly, no combination of Lak, Dasch, Sharpe, Liu or APA teaches or suggests all of the limitations of the claims and the rejections should be withdrawn.

In view of the above amendment, applicants believe the pending application is in condition for allowance, however, if the examiner has any further questions, he is invited to contact the undersigned agent or David C. Read, attorney for applicant, at the number below.

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Respectfully submitted,


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